

Notice of Allowability

Application No.

09/752,719

Applicant(s)

WILLIAMS ET AL.

Examiner

Jeffrey C. Pwu

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to 2/18/2005 Appeal Brief & 6/14/2005 Interview.
2. ☒ The allowed claim(s) is/are 1-23.
3. ☒ The drawings filed on 03 January 2001 are accepted by the Examiner.
4. ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
 - a) ☐ All b) ☐ Some* c) ☐ None of the:
 1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).
 - * Certified copies not received: _____.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.

THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.

5. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
 6. ☐ CORRECTED DRAWINGS (as "replacement sheets") must be submitted.
 - (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review (PTO-948) attached
 - 1) ☐ hereto or 2) ☐ to Paper No./Mail Date _____.
 - (b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date _____.
- Identifying Indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).
7. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

Attachment(s)

1. ☐ Notice of References Cited (PTO-892)
2. ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3. ☒ Information Disclosure Statements (PTO-1449 or PTO/SB/08),
Paper No./Mail Date 2/18/05
4. ☐ Examiner's Comment Regarding Requirement for Deposit
of Biological Material
5. ☐ Notice of Informal Patent Application (PTO-152)
6. ☒ Interview Summary (PTO-413),
Paper No./Mail Date _____
7. ☒ Examiner's Amendment/Comment
8. ☒ Examiner's Statement of Reasons for Allowance
9. ☐ Other _____

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1. This communication is in response to Appeal Brief filed 2/18/2005 and Interview 6/14/2005.

EXAMINER'S AMENDMENT

2. An examiner's amendment to the record appears below. Should the changes and/or additions be unacceptable to applicant, an amendment may be filed as provided by 37 CFR 1.312. To ensure consideration of such an amendment, it MUST be submitted no later than the payment of the issue fee.

Authorization for this examiner's amendment was given in a telephone interview with Mr. Glenn Snyder (Reg. No. 41,428) on 6/14/05.

Claims 1, 7, 8, 11, and 16 have been amended as follows.

In claims:

1. A network device configured to control communication of data frames between stations, comprising:

a logic device configured to detect a condition associated with a resource on the network device, wherein the condition relates to a congestion condition;

a frame generating device configured to generate a pause frame requesting suspension of data traffic in response to the detection of the condition, the pause frame including a priority indicator identifying a first priority; and

a transmit device configured to transmit the pause frame to at least one station, the pause frame requesting the at least one station to suspend transmission of data frames corresponding to the first priority to the network device, wherein the pause frame does not affect transmission of data frames corresponding to a priority other than the first priority.

7. The network device of claim 1, wherein the condition relates to a congestion condition[[, the congestion condition]] occurring when a predetermined number of data frames having the first priority are stored in at least one of an input queue and an output queue associated with a first port of the network device.

8. The network device of claim 1, wherein the condition comprises a congestion condition[[, the congestion condition]] occurring when a portion of a predetermined number of data frames having the first priority are stored in an input queue of a device configured to generate frame forwarding information.

11. In a network device that controls communication of data frames between stations, a method comprising:

detecting a condition on the network device, wherein the condition relates to a congestion condition;

generating a pause frame requesting suspension of data traffic of a first priority for a period of time, the pause frame not affecting data traffic of a priority other than the first priority

in response to detecting the condition, the pause frame including a priority indicator identifying the first priority; and

transmitting the pause frame to at least one station.

16. The method of claim 11, wherein the detecting a condition includes detecting a congestion condition associated with data frames having the first priority.

Allowable Subject Matter

3. Claims 1-23 are allowed.

The following is an examiner's statement of reason for allowance:

The present invention is directed to a method and system for performing priority-based flow control. The independent claim 1, identifies an uniquely distinct feature "configured to generate a pause frame requesting suspension of traffic in response to the detection of the condition, the pause frame including a priority indicator identifying a first priority; and ... the pause frame does not affect transmission of the data frames corresponding to a priority other than the first priority".

The independent claim 11, identifies an uniquely distinct feature "generating a pause frame requesting suspension of data traffic of a first priority for a period of time, the pause frame not affecting data traffic of a priority other than the first priority in response to detecting the condition".

The independent claim 21, identifies an uniquely distinct feature "a priority field including information representing a priority level associated with data frames for which data

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transmissions are to be suspended; and a pause frame field including information representing a length of time for at least one receiving station identified by the destination address field to suspend data transmission relating to the priority level in the priority field”.

The independent claim 22, identifies an uniquely distinct feature “generating a pause frame requesting suspension of data transmission in response to the congestion condition, the pause frame including a priority indicator corresponding to the first priority”.

The independent claim 23, identifies an uniquely distinct feature “identify a received data frame as a pause frame including a priority indicator, map the priority indicator to a first priority, suspend transmission of the data frames corresponding to the first priority, and continue transmission of data frames corresponding to priorities other than the first priority”.

The closest prior art, Drummond-Murray (U.S. 6,667,985) relates to switches for use in packet-based data communication systems, Crinion et al. (U.S. 6,181,699) discloses an apparatus for and method of assigning a VLAN tag to a frame received at a port of a switch, Lyon (U.S. 6,721,273) discloses a method and apparatus for traffic flow control in data switches. Whether taken alone or in combination fails to anticipate or render the above underline.

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled “Comments on Statement of Reason for Allowance.”

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4. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jeffrey C. Pwu whose telephone number is 571-272-6798.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David Wiley can be reached on 571-272-3923. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



6/20/05

JEFFREY PWU
PRIMARY EXAMINER